TOSHIBA 2SC3072

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

2 S C 3 0 7 2

STROBE FLASH APPLICATIONS

MEDIUM POWER AMPLIFIER APPLICATIONS

High DC Current Gain : $h_{FE} = 140 \sim 450$

$$(V_{CE} = 2 V, I_{C} = 0.5 A)$$

$$h_{FE} = 70$$
 (Min.) ($V_{CE} = 2 V$, $I_{C} = 4 A$)

Low Collector Saturation Voltage

: $V_{CE (sat)} = 1.0 V (Max.) (I_{C} = 4 A, I_{B} = 0.1 A)$

High Power Dissipation

: $P_C = 10 \text{ W} \text{ (Tc} = 25^{\circ}\text{C)}, P_C = 1.0 \text{ W} \text{ (Ta} = 25^{\circ}\text{C)}$

MAXIMUM RATINGS (Ta = 25°C)

CHARAC	SYMBOL	RATING	UNIT		
Collector-Base Voltage		v_{CBO}	50	V	
Collector-Emitter Voltage		v_{CES}	40	v	
		v_{CEO}	20		
Emitter-Base Voltage		$V_{ m EBO}$	8	V	
Collector	DC	$I_{\mathbf{C}}$	5	Α	
Current	Pulsed (Note 1)	ICP	8	Α	
Base Current		$I_{\mathbf{B}}$	0.5	Α	
Collector Power	$Ta = 25^{\circ}C$	Da	1.0	w	
Dissipation	$Tc = 25^{\circ}C$	PC	10		
Junction Temperature		T_{j}	150	$^{\circ}\mathrm{C}$	
Storage Temperature Range		T _{stg} -55~150		$^{\circ}\mathrm{C}$	

Unit in mm 0.6 ± 0.15 0.6MAX. (B) 0.6MAX. 0.95MAX. 0.6MAX 0.6 ± 0.15 COLLECTOR (HEAT SINK) **EMITTER JEDEC EIAJ** TOSHIBA (A) 2-7B1A (B) 2-7B2A

Weight: 0.36 g

Note 1: Pulse Test: Pulse Width = 10 ms (Max.) Duty Cycle = 30% (Max.)

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	ICBO	$V_{CB} = 40 \text{ V}, I_{E} = 0$	_	_	100	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 8 V, I_{C} = 0$	_	_	100	nA
Collector-Emitter Breakdown Voltage	V (BR) CEO	$I_{\mathrm{C}}=10\mathrm{mA},~I_{\mathrm{B}}=0$	20	_	_	V
DC Current Gain	hFE (1) (Note 2)	$V_{ m CE} = 2 m V, \ I_{ m C} = 0.5 m A$	140	_	450	
	hFE (2)	$V_{CE} = 2 V$, $I_{C} = 4 A$	70	_	_	
Collector-Emitter Saturation Voltage	V _{CE} (sat)	$I_{\rm C} = 4~{ m A},~I_{ m B} = 0.1~{ m A}$	_	_	1.0	V
Base-Emitter Voltage	$ m V_{BE}$	$V_{CE} = 2 V, I_{C} = 4 A$	_	_	1.5	V
Transition Frequency	${ m f_T}$	$V_{CE} = 2 V, I_{C} = 0.5 A$	_	100	_	MHz
Collector Output Capacitance	C _{ob}	$V_{CB} = 10 \text{ V}, I_{E} = 0,$ f = 1 MHz	_	40	_	pF

Note 2: $h_{FE\ (1)}$ Classification A: 140~240, B: 200~330, C: 300~450











